

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 77-63

NPDES NO. CA0038041

WASTE DISCHARGE REQUIREMENTS FOR:

SAN RAFAEL SANITATION DISTRICT  
MAIN PLANT  
MARIN COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board) finds that:

1. San Rafael Sanitation District - Main Plant (hereinafter discharger) by application dated February 14, 1977, has applied for waste discharge requirements and a permit to discharge wastes under the National Pollutant Discharge Elimination System.
2. The discharger presently discharges domestic and industrial wastes from its sewage treatment plant into San Rafael Bay, a water of the United States, at 122° 29', 20" latitude and 37° 57', 28" longitude.
3. The report of waste discharge describes the existing discharge as follows:  
  
Average Flow: 3.53 million gallons per day (mgd)  
  
Design Flow: 5.0 million gallons per day (mgd)
4. A Water Quality Control Plan for the San Francisco Bay Basin was adopted by the Board in April 1975. The Basin Plan contains water quality objectives for San Rafael Bay and San Francisco Bay.
5. The beneficial uses of the San Rafael Bay and San Francisco Bay are:
  - a. Recreation
  - b. Fish Migration and habitat
  - c. Habitat and resting for waterfowl and migratory birds
  - d. Industrial supply
  - e. Esthetic enjoyment
  - f. Navigation
  - g. Shellfish propagation and harvesting for nonhuman consumption
6. The discharger is presently governed by Waste Discharge Requirements Order No. 74-135 and Order No. 76-46 which allows discharge to San Rafael Bay.
7. The discharger and interested agencies and persons have been notified of the Board's intent to revise requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

8. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.
9. This project involves the continued operation of a publicly-owned facility to provide sewerage service with negligible or no expansion of use beyond that previously existing. Consequently, this project will not have a significant effect on the environment based upon the exemption provided in Section 15101, Title 14, California Administrative Code.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provision of the Federal Water Pollution Control Act, as amended, and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

A. Prohibitions:

1. Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited (receiving water to wastewater flow).
2. There shall be no bypass or overflow of untreated wastewater to waters of the State, either at the treatment plant or from the collection system.
3. The average dry weather flow shall not exceed 5.0 mgd. Average shall be determined over three consecutive months per year.

Exceptions to the above A.1 Prohibition will be considered for certain wet weather discharges and other discharges having a high initial dilution where an inordinate burden would be placed on the discharger relative to beneficial uses protected and when an equivalent level of environmental protection can be achieved by alternate means. Exceptions will also be considered where a discharge is approved as part of a reclamation project or where it can be demonstrated that environmental benefits will be derived as a result of the discharge.

B. Effluent Limitations:

1. Prior to achieving compliance with the limitations specified in B.2. below, the following interim limitations shall apply:

	<u>30 Day Average</u>	
a. BOD		45 mg/l (4320 lbs/day) max.
b. Suspended Solids		45 mg/l (4320 lbs/day) max.
c. Settleable Matter		
The arithmetic average of any 6 or more samples collected on any day		0.5 ml/l-hr maximum
Any Sample		1.0 ml/l-hr maximum

2. Effluent discharged shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>30-day Average</u>	<u>7-day Average</u>	<u>Maximum Daily</u>	<u>Instantaneous Maximum</u>
a) BOD	mg/l	30	45	60	-
	lbs/day	2880	-	5760	-
	kg/day	1305	-	2610	-
b) Suspended Solids	mg/l	30	45	60	-
	lbs/day	2880	-	5760	-
	kg/day	1305	-	2610	-
c) Grease & Oil	mg/l	10	-	20	-
	lbs/day	959	-	1918	-
	kg/day	435	-	870	-
d) Settleable Matter	ml/l-hr	0.1	-	-	0.2

3. Chlorine residual of the discharge shall not exceed an instantaneous maximum of 0.0 mg/l.
4. The arithmetic mean of the biochemical oxygen demand (50 day, 20°C) and suspended solids values, by weight, for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85 percent removal).
5. The pH of the discharge shall not exceed 8.5 or be less than 6.5.
6. In any representative set of samples the waste as discharged shall meet the following limit of quality:

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The survival of test organisms acceptable to this Board in 96-hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

7. Representative samples of the effluent shall not exceed the following limits more than the percentage of time indicated: (a)

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>50% of time</u>	<u>10% of time</u>
Arsenic	mg/l (kg/day)	0.01(0.189)	0.02(0.378)
Cadimium	mg/l (kg/day)	0.02(0.378)	0.03(0.567)
Total Chromium	mg/l (kg/day)	0.005(0.095)	0.01(0.189)
Copper	mg/l (kg/day)	0.2(3.78)	0.3(5.67)
Lead	mg/l (kg/day)	0.1(1.89)	0.2(3.78)
Mercury	mg/l (kg/day)	0.001(0.019)	0.002(0.038)
Nickel	mg/l (kg/day)	0.1(1.89)	0.2(3.78)
Silver	mg/l (kg/day)	0.02(0.378)	0.04(0.756)
Zinc	mg/l (kg/day)	0.3(5.67)	0.5(9.46)
Cyanide	mg/l (kg/day)	0.1(1.89)	0.2(3.78)
Phenolic Compounds	mg/l (kg/day)	0.5(9.46)	1.0(18.9)
Total Identifiable	mg/l (kg/day) (b)	0.002(0.038)	0.004(0.075)
Chlorinated Hydrocarbons			

(a) These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

(b) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

8. Total coliform bacteria for a median of 5 consecutive samples shall not exceed 240 MPN/100 ml. Any single sample shall not exceed 10,000 MPN/100 ml when verified by a repeat sample taken within 48 hours.

#### C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
  - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
  - b. Bottom deposits or aquatic growths;
  - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
  - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

- a. Dissolved oxygen      5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentrations than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
- b. Dissolved Sulfide      0.1 mg/l maximum.
- c. pH      Variation from natural ambient pH by more than 0.2 pH units.
- d. Un-ionized Ammonia      0.025 mg/l annual median  
as N      0.4 mg/l maximum

D. Land Disposal Requirements:

- 1. The discharge of sludge shall not cause waste material to be in any position where it is, or can be, carried from the Land Disposal Site at the plant and deposited in waters of the State.
- 2. The Land Disposal Site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the disposal site. Adequate protection is defined as protection from at least a 100-year storm, and from the highest tidal stage that may occur.
- 3. The disposal of Group 1 materials as defined in the California Administrative Code, Article 3, Section 2520, in the Land Disposal Site is prohibited.

E. Provisions:

- 1. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 74-135 and Order No. 76-46 adopted by the Board on November 1, 1974, and May 4, 1976. Order No. 74-135 and Order No. 76-46 are hereby rescinded.
- 2. The discharger shall comply with the following time schedule to assure compliance with specifications of this Order:

- a) Compliance with Effluent Limitations B.2.a., B.2.b., B.2.c., B.2.d., B.4., and B.6; Receiving Water Limitations C.1.a., C.1.c., C.2.d., and Prohibition A.1.:

<u>Task</u>	<u>Completion Date</u>
Full Compliance	July 1, 1977

- b) Compliance with Effluent Limitation B.7:

<u>Task</u>	<u>Completion Date</u>	<u>Report of Compliance</u>
Status Report of Compliance		July 15, 1977

<u>Task</u>	<u>Completion Date</u>	<u>Report of Compliance</u>
Documentation of compliance with effluent limitations	November 1, 1977	November 15, 1977

This Regional Board will consider amendment of the effluent limitation B.7. if the discharger demonstrates that compliance cannot be achieved through a program acceptable to the Board for source control and pretreatment standards.

- c) The discharger shall comply with all other effluent and receiving water limitations, prohibitions, and provisions of this Order immediately upon adoption.
- 3. The discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willfull and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
- 4. The discharger shall comply with the self-monitoring program as ordered by the Executive Officer.
- 5. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977, except B.3.
- 6. This Order expires June 15, 1982. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on June 21, 1977.

FRED H. DIERKER  
Executive Officer

Attachments:  
Standard Provisions, Reporting  
Requirements & Definitions